



**State of Missouri
Department of Natural Resources
Air Pollution Control Program
P.O. Box 176
Jefferson City, MO 65102**

For Office Use Only

Facility Name: _____

Permit No.: _____

Facility ID No.: _____

Effective Date _____

Expiration Date: _____

**GENERAL PERMIT/APPLICATION TO OPERATE
A GRAIN ELEVATOR AND/OR GRAIN PROCESSING
INSTALLATION**

for

Option A - Basic State and **Option B** - Intermediate State
Based on Standardized Limits

In compliance with the provisions of Missouri State Rule 10 CSR 10-6.065, this grain elevator and/or grain processing installation with potential emissions of less than 100 tons per year of particulate matter less than or equal to 10 microns in aerodynamic diameter (PM₁₀) is authorized to operate in the State of Missouri, in accordance with emissions limitations, operating requirements and other conditions set forth in this General Permit.

State of Missouri
Department of Natural Resources
Air Pollution Control Program

GRAIN ELEVATOR AND GRAIN PROCESSING
GENERAL AIR QUALITY OPERATING PERMIT APPLICATION
-- BASIC AND INTERMEDIATE STATE --
(Options A and B)

Complete and submit to:

Missouri Department of Natural Resources
Air Pollution Control Program
P.O. Box 176
Jefferson City, MO 65102-0176

All applications must be submitted in duplicate and accompanied by a single \$100 filing fee.

Section I - GENERAL INFORMATION (See instructions.)

A. Installation Name			County No.	Plant No.	Year Submitted	
Installation Street Address				County Name		
City	State	Zip Code	Installation Phone No. ()			
Installation Mailing Address			Installation Fax No. ()			
City	State	Zip Code				
Contact Person (Last) (First) (MI)						
Contact Person Title		1/4	1/4	Section	Township	Range
B. Parent Company Name			Contact Person		Phone No. ()	
Mailing Address			City		State	Zip Code
C. Installation Type (check one): <div style="display: flex; justify-content: space-between; padding: 0;"><div><input type="checkbox"/> Country Elevator</div><div><input type="checkbox"/> Feed Mill</div></div> <div style="display: flex; justify-content: space-between; padding: 0;"><div><input type="checkbox"/> Grain Elevator/Grind & Mix Feed</div><div><input type="checkbox"/> Terminal Elevator</div></div>						

D. Subpart DD Applicability:

If a grain elevator, does your installation have grain storage capacity greater than 2.5 million bu. and have any affected facilities as noted in the instructions that commenced construction, modification, or reconstruction after August 3, 1978?

☐ Yes ☐ No

If you checked "yes" above, go to Section 6.02 2. of the General Permit (Section VII) to check the "applicable" boxes for Missouri State Rule 10 CSR 10-6.070, New Source Performance Standards, Subpart DD and for the affected facilities at your installation.

E. Category of Installation (check one): ☐ Intermediate State ☐ Basic State
(You may need to go through Section III before checking a category.)

F. Type of Application (If this is the first time, check "initial"):

☐ Initial ☐ Renewal (Current Permit No. _____) ☐ Minor Permit Modification
☐ De Minimis Modification ☐ Administrative Amendment

SECTION II - EMISSION INVENTORY. If your installation has not previously submitted the annually required Emission Inventory Questionnaire Forms, you need to obtain these forms and submit them with this application in duplicate. Otherwise, you do not need to submit these forms. Amendments or changes to a previously submitted EIQ must be submitted at the same time as the general operating permit application. The additional EIQ forms must clearly state that they are replacement or additional forms.

SECTION III - POTENTIAL EMISSIONS. Choose and complete only one of the following options -- A or B. See instructions.

Option A:

Basic State Installation. If this subsection applies, your installation is Basic State, and no new limits or requirements need be applied.

1. Maximum Annual Receiving Capacity (MARC) -- for Country Elevators only.

a. What was the highest annual amount of grain received during the previous 5 years? _____ bu./yr.

b. Below multiply the figure in a. above times the factor 1.2 -- the result is your MARC:

_____ bu./yr. X 1.2 = _____ bu./yr. (MARC)

If your MARC is less than 9,719,817 bushels per year, then enter your MARC in the table below. Note: **If at any time your MARC exceeds 9,719,827 bushels per year**, then you no longer qualify for a Basic State operating permit and must apply for an Intermediate State operating permit.

Maximum Annual Receiving Capacity	
Country Elevator (only)	bu/yr

2. Existing Receiving or Production Permit Limits. If lower than that noted in the instructions, note any present **installation-wide** annual receiving or production limit contained in your State or local agency-Issued "Permits to Construct" in the blank(s) provided, and also, check the "applicable" box in Section 8.02 of the General Permit (Sect. VII).

Existing Installation-Wide Receiving or Production Permit Limits		
Permit No. & Condition No.	Installation Type	Annual Receiving and Production Rates*
	Country Elevator	bu/yr
	Terminal Elevator	bu/yr
	Grain Elevator/	bu/yr
	Grind & Mix Feed	tons/yr
	Feed Mill	tons/yr

*As contained in present "Permits to Construct."

After completing this subsection, proceed to Section IV - Existing Permit Conditions of the application to enter other specific process limits and related information.

Option B:

Intermediate State Installation -- Potential Emissions Limited to Less Than 100 TPY by Standardized Receiving and/or Production Limits without Additional Control Devices. If your installation is willing to agree to any of the standardized limits noted in the instructions for this subsection and below, then check the blank below indicating what production/process limits your installation is willing to accept. Be sure to check the "applicable" box in Section 8.01 of the General Permit (Sect. VII) as well.

Installation Type	Standardized Annual Receiving and Production Rates
Country Elevator	____ 9,719,827 bu/yr
Terminal Elevator	____ 8,956,896 bu/yr
Grain Elevator/ Grind & Mix Feed	____ 9,537,931 bu./yr. ____ 20,000 tons/yr.
Feed Mill	____ 500,000 tons/yr.

Does your installation have boilers capable of firing fuel oil with combined total heat input greater than 14,200,000 BTU's/Hr.?

☐ Yes ☐ No

If "yes," check the "Applicable" box in Section 9.02 of the Permit.

When done, proceed to Section IV - Existing Permit Conditions.

Section IV - Existing Permit Conditions. (Note: This section does not apply to present **installation-wide** annual receiving or production limits at Basic State Installations. These should have already been entered in Section III Option A.) Please note in the tables below existing permit conditions that limit production or process throughputs, amount and type of fuel combusted, or that require the operation of a pollution control device (do not include watering haul roads). These would be found in your State or local agency-Issued "Permits to Construct." Also, be sure to note that these same limits and requirements are applicable by checking the "applicable" box in Sections 7.01(if Table A is applicable), 8.02 (if Table B is applicable) and 9.01 (if Table C is applicable) of Section VII - General Permit.

Table A - Existing Particulate Control Device Permit Requirements				
Permit No. & Condition No.	Control Device Type	Control Device I.D. #	Emission Units Controlled	Emission Unit I.D. #

Table B - Existing Receiving, Processing or Production Permit Limits			
Permit No. & Condition No.	Installation or Process Type	Grain Receiving or Processing Limit (Bu./Yr.)	Feed Production or Processing Limit (Tons/Yr.)
	Country Grain Elevator		
	Terminal Grain Elevator		
	Grain Elevator/Grind & Mix Feed		
	Feed Mill		
	Other Process (specify): _____		
	Other Process (specify): _____		
	Other Process(specify): _____		

Table C - Existing Fuel Combustion Permit Limits						
Permit No. & Condition No.	Combustion Unit Description & Emission Unit ID#	LPG Limit (Gallons/Yr.)	Natural Gas Limit (MMCF/Yr.)	Fuel Oil Limits		
				Gallons/Yr.	Sulfur (%)	Other

Section V - Compliance Statement

- A. Compliance status with respect to all Applicable Requirements effective at time of Permit Issuance as noted in Section VII - General Permit under Section 6.0 - Applicable Requirements.; Section 7.0 - Pollution Control Requirements., if applicable; Section 8.0 - Production or Processing Limits., if applicable; and Section 9.0 - Fuel Combustion Limits, if applicable.

Will your installation be in compliance with all applicable requirements at the time of permit issuance and continue to comply with these requirements?

☐ Yes ☐ No (If yes, go to Subsection B. of this Section; if no, complete 1. - 4. below for each applicable requirement for which compliance is not achieved.)

1. Identify applicable requirement for which compliance is not achieved:

2. Narrative description of how compliance will be achieved with this applicable requirement:

3. Detailed Schedule of Compliance:

<u>Steps</u>	<u>Date Expected</u>
<hr/>	<hr/>
<hr/>	<hr/>

4. Frequency for submittal of progress reports (6 month minimum)

Starting date for submittal of progress reports:

____/____/____

- B. Compliance status with respect to all Applicable Requirements effective after permit issuance:

Will your installation be in compliance with all applicable requirements taking effect during the term of the permit and meet such requirements on a timely basis?

☐ Yes ☐ No (If yes, go to next section; if no, complete 1. and 2. below for each requirement for which compliance is not expected.)

1. Identify applicable requirement that you expect will not be complied with:

2. Detailed schedule leading to compliance:

<u>Steps</u>	<u>Date Expected</u>
<hr/>	<hr/>
<hr/>	<hr/>

Section VI - Applicant's Certification Statement

"I certify, based on information and belief formed after reasonable inquiry, the statements and information in this document are true, accurate and complete."

Signature of Responsible Official of Company_____ Date_____

Type or Print Name of Signer_____

Official Title of Signer_____ Telephone No. (____) _____

Section VII - General Permit. Go through the General Permit and address all "check boxes."

GENERAL PERMIT TO OPERATE A GRAIN ELEVATOR AND/OR GRAIN PROCESSING INSTALLATION

Section 1.0 - Coverage Under This Permit

- 1.01 This installation shall qualify as a Basic State or an Intermediate State Installation as set forth in Missouri State Rule 10 CSR 10-6.065(1)(B) and (C).
- 1.02 This installation shall not qualify as a Part 70 Installation as set forth in Missouri State Rule 10 CSR 10-6.065(1)(D).
- 1.03 The permittee shall be subject to an enforcement action for operating without an individual operating permit if it is later determined that the source does not qualify for this General Operating Permit. The permitting authority's decision to issue this permit is based on the representations made by the permittee in the General Operating Permit Application.

Section 2.0 - Permit Flexibility and Modifications

- 2.01 The permittee shall have the permit flexibility to make changes at the grain elevator and/or grain processing installation as long as the proposed change is not considered a permit modification or does not exceed the emission limitations in Section 6.0 of this permit. A permit modification includes any proposed change at the installation which increases the potential emissions of PM₁₀ equal to or greater than 100 tons per year. If the permitting authority considers the proposed change as a modification, the grain elevator shall be required to obtain an individual permit issued under Missouri State Rule 10 CSR 10-6.065(6) Part 70 Operating Permits.
- 2.02 The owner or operator shall provide the permitting authority written notice at least seven (7) days prior to the proposed change. The written notice shall include a brief description of the change(s) within the permitted installation, the date on which the change is to occur, and any change in emissions. The permitting authority will notify the owner or operator whether the proposed change can be completed or will be considered a permit modification and have to undergo the appropriate procedures before the proposed change can be completed.
- 2.03 A permit modification will not be considered a permit change that:
 - 1. Corrects typographical errors such as misspelled words, incorrect effective date, etc.;
 - 2. Allows for a change in ownership or operational control of a grain elevator and/or grain processing installation where the permitting authority determines that no other change in the general permit is necessary, provided that a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new permittee must be submitted to the permitting authority;
 - 3. Incorporates into this permit the requirements of a unified construction permit issued by the permitting authority as long as potential PM₁₀ emissions are less than 100 tons per year;
 - 4. Does not increase the potential emissions of PM₁₀ equal to or greater than 100 tons per year; or
 - 5. Any other change that the permitting authority determines to be of similar nature to those in this subsection.

Section 3.0 - Permit Renewal and Expiration

- 3.01 This permit is issued for a fixed term of five (5) years. The permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted.
- 3.02 **Duty to reapply.** The owner or operator of the installation shall submit a timely and complete operating permit application for permit renewal in accordance with this section.
 - 1. **Timely application renewal.** For purposes of permit renewal, a timely application is one that is submitted at least six (6) months prior to the date of permit expiration.

2. **Complete application.**

- a. An application will be deemed complete if it provides all the information required in the General Permit Application Form.
- b. The application for renewal shall include the current permit number, the appropriate renewal fee, description of any permit revisions and permit changes that occurred during the permit term, and any applicable requirements that were promulgated and not incorporated into the permit during the permit term.
- c. After receipt the permitting authority shall determine whether the application is complete and inform the applicant that it is complete within sixty (60) days after receipt of the application. If the permitting authority determines that the application is not complete, it shall inform the applicant promptly.
- d. An installation which has submitted a timely and complete application may continue to operate without a permit from the date the application is determined to be complete subject to final action by the permitting authority on the renewal application, provided that the applicant submits any requested additional information by the deadline established by the permitting authority.

3. **Permit expiration.** Permit expiration terminates the installation's right to operate unless a timely and complete renewal application has been submitted.

Section 4.0 - General Compliance/Enforcement Provisions

- 4.01 **Compliance Requirement.** The permittee must comply with the applicable requirements and all conditions of this permit. Any document (including reports) required to be submitted by this permit shall contain a certification by a responsible official.
- 4.02 **Noncompliance.** Any permit noncompliance constitutes a violation and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.
- 4.03 **Severability Clause.** The various requirements of this permit shall remain valid in the event of a challenge to any portions of the permit.

Section 5.0 - Permit Reopening Provision.

This General Permit may be reopened, revoked and reissued or terminated during its term, for cause.

Section 6.0 - Applicable Requirements. The following rules shall apply to this installation.

- 6.01 **Installation Level.** The following are deemed by Missouri DNR to be applicable on an installation-wide basis.

1. **General**

1. 10 CSR 10-6.110, *Submission of Emission Data, Emission Fees and Process Information*
 - (1) Emission Fees: \$25.70 per actual ton of pollutant
 - (2) Record Keeping Requirement: Emission Inventory Questionnaire (EIQ)
 - (3) Monitoring Requirement: None
 - (4) Reporting Requirement: Submit an annual emission inventory on forms, EIQ, furnished by the program by April 1, and shall include emission data, emission fees and process information for the previous calendar year.
- b. 10 CSR 10-6.065, *Operating Permits*
 - (1) Emission Limitation: None
 - (2) Record Keeping Requirement: None
 - (3) Monitoring Requirement: None
 - (4) Reporting Requirement: Submission of Annual Compliance Report and/or certification
- c. 10 CSR 10-6.060, *Construction Permits Required* (See Section IV of the General Permit/Application for State and local permit numbers and requirements.)
 - (1) Emission Limitation: Varies with "Permit to Construct"
 - (2) Record Keeping Requirement: Varies with "Permit to Construct"

- (3) Testing Requirement: Varies with "Permit to Construct"
- (4) Monitoring Requirement: Varies with "Permit to Construct"
- (5) Reporting Requirement: Reporting required by "Permit to Construct"

d. *Open Burning Restrictions*

- 10 CSR 10-2.100 (Kansas City Area)
- 10 CSR 10-3.030 (Outstate Missouri Area)
- 10 CSR 10-4.090 (Springfield-Green County Area)
- 10 CSR 10-5.070 (St. Louis Area)

- (1) Emission Limitation: No person may conduct, cause, permit, or allow open burning of refuse, for salvage, or trade waste after September 17, 1971. (See specific regulation for exceptions to this limitation.)
- (2) Compliance Demonstration: Previous DNR inspection reports can be used to demonstrate compliance with this regulation.
- (3) Record Keeping Requirement: DNR inspection reports
- (4) Monitoring Requirement: Periodic DNR inspections
- (5) Reporting Requirement: None

e. *Time Schedule for Compliance*

(Note: for Kansas City, Springfield-Greene County, and St. Louis Areas only)

- 10 CSR 10-2.150 (Kansas City Area)
- 10 CSR 10-4.140 (Springfield-Green County Area)
- 10 CSR 10-5.250 (St. Louis Area)

Check one:

☐ Not Applicable

☐ Applicable

- (1) Emission Limitation: This regulation specifies the time schedule for compliance with regulations by new and existing sources. Compliance with the new provisions of this regulation shall be according to the following time schedule:
All new installations shall comply as of going into operation; and all existing installations not in compliance as of the effective date; March 25, 1976 for the Kansas City Area, March 25, 1976 for the Springfield-Greene County Area, and March 24, 1967 for the St. Louis Area, shall be in compliance within six (6) months of the effective date.
- (2) Record Keeping Requirement: None
- (3) Monitoring Requirement: None
- (4) Reporting Requirement: Submit to the Director a compliance plan and schedule if not in compliance with this regulation.

f. 10 CSR 10-6.050, *Start-up, Shutdown, and Malfunction*

- (1) Emission Limitation: None
- (2) Monitoring Requirement: None
- (3) Reporting Requirement: Provide information to demonstrate that the excess emissions were the consequence of a malfunction, start-up or shutdown. The information to be submitted to the director not later than fifteen (15) days after receipt of the notice of excess emissions shall include, at a minimum, the following:
 - (a) Name and location of installation;
 - (b) Name and telephone number of person responsible for the installation;
 - (c) The identity of the equipment causing the excess emissions;
 - (d) The time and duration of the period of excess emissions;
 - (e) The cause of the excess emissions;
 - (f) The type of air contaminant involved;
 - (g) A best estimate of the magnitude of the excess emissions;
 - (h) The measures taken to mitigate the extent and duration of the excess emissions; and
 - (i) The measures taken to remedy the situation which caused the excess emissions and the measures taken or planned to prevent the recurrence of these situations.

- g. 10 CSR 10-6.130, *Controlling Potential Emissions During Episodes of High Air Pollution Potential*
 - (1) Emission Limitation: This rule specifies the conditions that establish an air pollution alert (yellow/red), watch or emergency and the associated procedures and emissions reduction objectives for dealing with each.
 - (2) Record keeping Requirement: None
 - (3) Monitoring Requirement: None
 - (4) Reporting Requirement: Submission of emergency plan if required by the Director
- h. 10 CSR 10-6.150, *Circumvention*
 - (1) Emission Limitation: No person shall cause or permit the installation or use of any device or any means which, without resulting in reduction in the total amount of air contaminant emitted, conceal or dilute an emission or air contaminant which violates a rule of the Missouri Air Conservation Commission.
 - (2) Record Keeping Requirement: None
 - (3) Monitoring Requirement: None
 - (4) Reporting Requirement: None
- 1. 10 CSR 10-5.040, *Use of Fuel in Hand-Fired Equipment Prohibited* (**Note:** for St. Louis Area only)

Check one:

☐ Not Applicable

☐ Applicable

- (1) Emission Limitation: It shall be unlawful to operate any hand-fired fuel-burning equipment in the St. Louis, Missouri metropolitan area. Hand-fired fuel-burning equipment is defined as any fuel-burning equipment including, but not limited to, furnaces, heating and cooking stoves and hot water furnaces.
 - (2) Compliance Demonstration: Previous DNR inspection reports can be used to demonstrate compliance with this regulation.
 - (3) Record Keeping Requirement: DNR inspection reports
 - (4) Monitoring Requirement: Periodic DNR inspections
 - (5) Reporting Requirement: None
- 2. **PM₁₀**
 - a. 10 CSR 10-6.065, *Operating Permits*
 - (1) Emission Limitation: Intermediate only - Grain receiving and/or feed production limit (Table in Section III Option B of this General Permit/Application) and fuel combustion limit as contained in Section 9.02 of the this General Permit
 - (2) Record Keeping Requirement: As required in Sections 8.03 and 9.03 of this General Permit
 - (3) Monitoring Requirement: None
 - (4) Reporting Requirement: As required in Sections 8.04 and 9.04 of this General Permit
- 3. **Visible Emissions**
 - a. *Restriction of Emission of Visible Air Contaminants*
 - 10 CSR 10-2.060 (Kansas City Area)
 - 10 CSR 10-3.080 (Outstate Missouri Area)
 - 10 CSR 10-4.060 (Springfield-Green County Area)
 - 10 CSR 10-5.090 (St. Louis Area)
 - (1) Emission Limitation: Opacity of emissions not to exceed or equal 20%
 - (2) Compliance Demonstration: Previous DNR inspection reports can be used to demonstrate compliance with this regulation.
 - (3) Record Keeping Requirement: DNR inspection reports
 - (4) Monitoring Requirement: Visual inspection, EPA Method 9; Performed during periodic DNR inspections
 - (5) Reporting Requirement: None

4. Fugitive Emissions

- a. 10 CSR 10-6.170, *Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin*
 - (1) Emission Limitation: No visible particulate matter in the ambient air beyond property line of origin; or, no particulate matter found on surfaces beyond property line of origin.
 - (2) Compliance Demonstration: Previous DNR inspection reports can be used to demonstrate compliance with this regulation.
 - (3) Record Keeping Requirement: DNR inspection reports
 - (4) Monitoring Requirement: Visual inspection performed during periodic DNR inspections
 - (5) Reporting Requirement: None

5. Odor

- a. *Restriction of Odor Emissions*
 - 10 CSR 10-2.070 (Kansas City Area)
 - 10 CSR 10-3.090 (Outstate Missouri Area)
 - 10 CSR 10-4.070 (Springfield-Green County Area)
 - 10 CSR 10-5.160 (St. Louis Area)
- (1) Emission Limitation: This section requires that no person may cause, permit or allow the emissions of odorous matter in concentrations and frequencies or for durations that odor can be perceived when one (1) volume of odorous air is diluted with seven (7) volumes of odor-free air for two (2) separate trials not less than fifteen (15) minutes apart within the period of one (1) hour.
- (2) Compliance Demonstration: Previous DNR inspection reports can be used to demonstrate compliance with this regulation.
- (3) Record Keeping Requirement: DNR inspection reports
- (4) Monitoring Requirement: Periodic DNR inspections
- (5) Reporting Requirement: None

6.02 Various Grain and Feed Emission Units as Noted Below.

1. Particulate Matter

- a. *Restriction of Emission of Particulate Matter from Industrial Processes*
 - 10 CSR 10-2.030 (Kansas City Area)
 - 10 CSR 10-3.050 (Outstate Missouri Area)
 - 10 CSR 10-4.030 (Springfield-Green County Area)
 - 10 CSR 10-5.050 (St. Louis Area)
- (1) Emission Limitation: No person shall cause, suffer, allow or permit the emission of particulate matter in any one (1) hour from any source in excess of the amount determined by the following empirical equations:
 ≤ 30 tons per hour: $E = 4.10 \times P^{0.67}$
 > 30 tons per hour: $E = 55.0 \times P^{0.11} - 40$
where E = emission limit in lbs./hr. and P = max. rated capacity in tons/hr.
- (2) Affected Grain and Feed Industry Emission Units.
 - (a) Grain and/or Feed Industry affected emission units:
 - i. Bin Vents
 - ii. Grain Cleaning (internal operation)
 - (b) Grain Industry affected emission units
 - i. Tunnel Belts (if applicable - internal operation)
 - ii. Gallery Belts (internal operation)
 - iii. Headhouse (internal operation)
 - (c) Feed Industry affected emission units
 - i. Receiving
 - ii. Hammermilling
 - iii. Flaking
 - iv. Cracking
 - v. Pellet Cooling
 - vi. Shipping
- (3) Compliance Demonstration:
 - (a) Feed Mill. For a feed mill the "worst case" emission unit is pelleting with a standard cyclone. The emission factor is 0.433 pound of PM per ton of feed. The "worst case" process rate is about 60 tph. If the highest rate for which compliance can be shown is greater than or equal to 60 tph, then 60 tph is obviously in compliance:

For P = 123 tph, E = 53.38 lbs/hr and ER = 123 tph X 0.433 lb/ton = 53.26 lbs/hr

The highest process rate for which compliance can be demonstrated is 123 tph. Therefore, the pelleting process at 60 tph, which is less than 123 tph, is in compliance. Since the "worst case" emission unit is in compliance, all other emission units at a feed mill are in compliance with this rule as well.

- (b) Grain Elevator. For a grain elevator the "worst case" emission unit is the headhouse at a large elevator. The emission factor is 0.087 pound of PM per ton of grain received as taken from AP-42, Section 9.9.1. A mixed grain "dustiness" factor of 1.95 is considered as well. The "worst case" process rate is about 348 tph (approximately 12,000 bu/hr). If the highest rate for which compliance can be shown is greater than or equal to 348 tph, then 348 tph is obviously in compliance:

For P = 388 tph, E = 65.96 lbs/hr and ER = 388 tph X 0.087 lb/ton X 1.95 = 65.82 lbs/hr

The highest process rate for which compliance can be demonstrated is 388 tph. Therefore, the headhouse at 348 tph, which is obviously less than 388 tph, is in compliance. Since the "worst case" emission unit is in compliance, all other emission units at a grain elevator are in compliance with this rule as well.

Previous DNR inspection reports can be used along with the above to demonstrate compliance with this regulation along with source verification of emissions as noted in (5) below.

- (4) Record Keeping Requirement: DNR inspection reports
(5) Monitoring Requirement: Periodic DNR inspections and source verification that the emissions are maintained at levels less than or equal to the values shown in the above compliance demonstration.
(6) Reporting Requirement: None
- b. 10 CSR 10-6.070, Subpart DD, (40 CFR part 60), *Standards of Performance for Grain Elevators*. (See instructions and application form.)

Check one: ☐ Not Applicable ☐ Applicable

- (1) Affected Facilities and Emission Limitations (Check the appropriate "yes" or "no" blank indicating applicability of this rule to an affected facility.)

Applicable?

YesNo The following affected facilities are limited to 5% opacity:

- ____ (a) Truck unloading station
____ (b) Railcar unloading station
____ (c) Railcar loading station

The following affected facility is limited to 10% opacity:

- ____ (d) Truck loading station

The following affected facility is limited to 20% opacity:

- ____ (e) Barge or ship loading station

The following affected facility is limited to 0% opacity:

(f) Grain dryer:

- ____ i. Column dryer with column plate perforations > 2.4 mm diam. or
____ ii. Rack dryer in which exhaust gases pass through a screen filter coarser than 50 mesh

The following affected facilities are limited to 0% opacity and 0.023 g/dscm (ca. 0.01gr/dscf):

- ____ (g) Bucket elevators or legs (excluding legs used to unload barges or ships)
____ (h) Scale hoppers and surge bins (garners)
____ (i) Turn heads
____ (j) Scalpers
____ (k) Cleaners
____ (l) Trippers

- _____ (m) Headhouse and other such structures
The following affected facility is required to be operated as set forth below:
- _____ (n) Barge or ship unloading station. The owner or operator of any barge or ship unloading station shall operate as follows:
- i. The unloading leg shall be enclosed from the top (including the receiving hopper) to the center line of the bottom pulley and ventilation to a control device shall be maintained on both sides of the leg and the grain receiving hopper.
 - ii. The total rate of air ventilated shall be at least 32.1 actual cubic meters per cubic meter of grain handling capacity (ca. 40 ft³/bu).
- (2) Compliance Demonstration: Test results of performance testing specified in 40 CFR 60.303 and previous DNR inspection reports can be used to demonstrate compliance with this regulation.
 - (3) Record Keeping Requirement: None
 - (4) Monitoring Requirement: Testing as specified in 40 CFR 60.303 shall be conducted on or after the sixtieth day after achieving a maximum production rate, but not later than 180 days after initial startup.
 - (5) Reporting Requirement: The results of the testing shall be reported within 30 days of the completion of the testing.

6.03 Dryers/Boilers

1. Particulate Matter

a. *Maximum Allowable Emissions of Particulate Matter from Fuel Burning Equipment Used for Indirect Heating*

- 10 CSR 10-2.040 (Kansas City Area)
- 10 CSR 10-3.060 (Outstate Missouri Area)
- 10 CSR 10-4.040 (Springfield-Green County Area)
- 10 CSR 10-5.030 (St. Louis Area)

- (1) Emission Limitation: For Existing and New dryers or boilers with the following heat input ranges, the following emission limits or equations apply:

(a) Kansas City Area and St. Louis Area:

Check one: ☐ Not Applicable ☐ Applicable

- i. Existing - Commenced construction on or before February 15, 1975
 - 1) Heat input rate less than 10 MMBTU/hr, Emission Limit = 0.60 Lbs./MMBTU/hr.
 - 2) Heat input rate greater than or equal to 10 MMBTU/hr and less than 5000 MMBTU/hr,
 $E = 1.09 \times Q^{-0.259}$
 - 3) Heat input rate greater than 5000 MMBTU/hr, Emission Limit = 0.12 Lbs./MMBTU/hr.
- ii. New - Commenced after February 15, 1979
 - 1) Heat input rate less than 10 MMBTU/hr, Emission Limit = 0.40 Lbs./MMBTU/hr.
 - 2) Heat input rate greater than or equal to 10 MMBTU/hr and less than 5000 MMBTU/hr,
 $E = 0.80 \times Q^{-0.301}$
 - 3) Heat input rate greater than 5000 MMBTU/hr, Emission Limit = 0.12 Lbs./MMBTU/hr.

(b) Outstate Missouri Area:

Check one: ☐ Not Applicable ☐ Applicable

- i. Existing - Commenced construction on or before April 3, 1971
 - 1) Heat input rate 10 MMBTU/hr or less, Emission Limit = 0.60 lbs/MMBTU/hr.
 - 2) Heat input rate between 10 MMBTU/hr and 10,000 MMBTU/hr, $E = 0.90 \times Q^{-0.174}$
 - 3) Heat input rate 10,000 MMBTU/hr or more, Emission Limit = 0.18 lbs/MMBTU/hr.
- ii. New - Commenced after April 3, 1971
 - 1) Heat input rate 10 MMBTU/hr or less, Emission Limit = 0.60 lbs/MMBTU/hr.
 - 2) Heat input rate between 10 MMBTU/hr and 2000 MMBTU/hr, $E = 1.31 \times Q^{-0.338}$
 - 3) Heat input rate 2000 MMBTU/hr or more, Emission Limit = 0.10 Lbs./MMBTU/hr.

(b) Springfield-Green County Area:

Check one: ☐ Not Applicable ☐ Applicable

- 1) Heat input rate 10 MMBTU/hr or less, Emission Limit = 0.60 lbs/MMBTU/hr.
- 2) Heat input rate between 10 MMBTU/hr and 10,000 MMBTU/hr, $E = 1.02 \times Q^{-0.223}$
- 3) Heat input rate 10,000 MMBTU/hr or more, Emission Limit = 0.12 lbs/MMBTU/hr.

Where E = particulate emission rate in lbs/MMBTU/hr and Q = the dryer or boiler rated heat input in MMBTU/hr.

- (2) Compliance Demonstration: The "worst case" unit for either a grain elevator or feed mill is a 10 MMBTU/hr boiler fired with #5 fuel oil, which has a TSP emission factor of 10 lbs/1000 gal. The PM emission limit is 0.60 lb/MMBTU/hr. If while burning #5 fuel oil in the "worst case" boiler the PM ER is ≤ 0.60 lb/MMBTU/hr, then all boilers and dryers at all grain and feed installations are in compliance.

$$\begin{aligned} \text{ER} &= (10 \text{ lbs/1000 gal}) \times (1 \text{ gal/150000 Btu}) \times (10 \text{ MMBTU/hr}) \times (1/10 \text{ MMBTU}) \\ &= 0.07 \text{ lbs/MMBTU/hr} < 0.60 \text{ lbs/MMBTU/hr} \end{aligned}$$

Therefore, all indirect heating units at grain and feed installations are in compliance. Previous DNR inspection reports can be used along with the above to demonstrate compliance with this regulation along with source verification of emissions as noted in e. below.

- (3) Record Keeping Requirement: DNR inspection reports
- (4) Monitoring Requirement: Periodic DNR inspections and source verification that the emissions are maintained at levels less than or equal to the values shown in the above compliance demonstration.
- (5) Reporting Requirement: None

2. **SO₂**

a. *Restriction of Emissions of Sulfur Compounds from Indirect Heating Sources*

- 10 CSR 10-2.200 (Kansas City Area)
- 10 CSR 10-3.150 (Outstate Missouri Area)
- 10 CSR 10-4.190 (Springfield-Green County Area)
- 10 CSR 10-5.110 (St. Louis Area)

- (1) Emission Limitation: Applies to installations in which fuel is burned for the primary purpose of producing steam, hot water or hot air or other indirect heating of liquids, gases or solids and in the course of doing so, the products of combustion do not come into direct contact with process materials.

- (a) Kansas City Area, Outstate Missouri Area, and Springfield-Greene County Area (Outstate Missouri is all of Missouri except for Kansas City, Springfield-Greene County, and St. Louis Areas):

Check one: ☐ Not Applicable ☐ Applicable

For indirect heating sources $\geq 350,000$ Btu/hr actual heat input:

No person shall cause or allow emissions of sulfur dioxide into the atmosphere from any indirect heating source in excess of eight (8) pounds of sulfur dioxide per MMBTU actual heat input averaged on any three (3) hour basis.

(b) St. Louis Area:

Check one: ☐ Not Applicable ☐ Applicable

- i. For indirect heating sources $\geq 2,000$ MMBTU/hr actual heat input:
No person shall cause or allow emissions of sulfur dioxide into the atmosphere from any indirect heating source in excess of 2.3 pounds of sulfur dioxide per MMBTU actual heat input averaged on any three (3) hour basis.
- ii. For indirect heating sources $< 2,000$ MMBTU/hr actual heat input:
No person shall burn or permit the burning of any fuel oil containing more than two percent (2%) sulfur during the months of October, November, December, January, February and March each year, otherwise the limit shall be four percent (4%) sulfur. Unless the installation can show that the emissions of sulfur dioxide from the installation into the atmosphere will not exceed 2.3 pounds per MMBTU of heat input.

- (2) Compliance Demonstration: The "worst case" unit for either a grain elevator or feed mill is a 10 MMBTU/hr boiler fired with #5 fuel oil, which has a SO₂ emission factor of "159 X Sulfur Content (%)" / 1000 gal and "worst case" sulfur content of 2%. In reality, it will be no higher than 1.5%. The SO₂ emission limit is 8.0 lb/MMBTU/hr. For the St. Louis area, the most restrictive limit is a 2% limit on fuel oil sulfur content which will be the highest content for this boiler. If while burning #5 fuel oil in the "worst case" boiler the SO₂ ER is ≤ 8.0 lb/MMBTU/hr, then all boilers and dryers at all grain and feed installations are in compliance.

$$\begin{aligned} \text{ER} &= ((159 \times 2) \text{ lbs/1000 gal}) \times (1 \text{ gal/150000 Btu}) \times (10 \text{ MMBTU/hr}) \times (1/10 \text{ MMBTU}) \\ &= 2.12 \text{ lbs/MMBTU/hr} < 8.0 \text{ lbs/MMBTU/hr} \end{aligned}$$

Therefore, all indirect heating units at grain and feed installations are in compliance. Even if the sulfur content were 4%, the "worst case" boiler would still be in compliance, except for 6 months out of the year in the St. Louis Area:

$$\begin{aligned} \text{ER} &= ((159 \times 4) \text{ lbs/1000 gal}) \times (1 \text{ gal/150000 BTU}) \times (10 \text{ MMBTU/hr}) \times (1/10 \text{ MMBTU}) \\ &= 4.24 \text{ lbs/MMBTU/hr} < 8.0 \text{ lbs/MMBTU/hr} \end{aligned}$$

Previous DNR inspection reports can be used along with the above to demonstrate compliance with this regulation along with source verification of emissions as noted in e. below.

- (3) Record Keeping Requirement: DNR inspection reports
(4) Monitoring Requirement: Periodic DNR inspections and source verification that the emissions are maintained at levels less than or equal to the values shown in the above compliance demonstration.
(5) Reporting Requirement: None

3. **General**

- a. 10 CSR 10-5.120, *Information on Sales of Fuels to be Provided and Maintained*

(Note: St. Louis Area installations only that receive deliveries of residual fuel oil -- grade Nos. 4, 5 and 6)

Check one: ☐ Not Applicable ☐ Applicable

- (1) Emission Limitation: None
(2) Record Keeping Requirement: Every delivery of residual fuel oil when first delivered to a consumer or wholesaler in the St. Louis metropolitan area must be accompanied by a ticket prepared in triplicate and containing at least the name and address of the seller and the buyer and the source of the fuel. One (1) copy of each ticket shall be kept by the person delivering the fuel and be retained for one (1) year; and one (1) copy is to be given to the recipient of the fuel to be retained for one (1) year.
(3) Monitoring Requirement: Periodic DNR inspections
(4) Reporting Requirement: Upon request, within thirty (30) days after delivery of the fuel, the delivering party shall mail one (1) copy to the Air Conservation Commission.

6.04 **Kansas City Local Rules.** Kansas City Health Department, Air Quality Section, Chapter 18, Article III - Air Pollution (Chapter 8, Air Quality)

Check one: ☐ Not Applicable ☐ Applicable

Section 8-4. Open Burning

Section 8-5. Emission of Particulate Matter

Section 8-6. Emission of Sulfur Compounds

Section 8-7. Emission of Odors

Section 8-8. Emission of Volatile Organic Compounds

Section 8-9. Emission of Hazardous Air Pollutants

Section 8-10. Review of New Sources and Modifications; Permit for Construction or Major Modification

Section 8-11. Permit to Operate

Section 8-12. Dilution of Emission

Section 8-15. Emissions Resulting from Uncontrollable Force or Malfunctions

Section 8-16. Actionable Rights; Violations Declared Public Nuisance

Section 8-17. Emergency Conditions

Section 8-18. Control of Emissions During Periods of High Air Pollution Potential

6.05 **Springfield-Greene County Local Rules.** Springfield-Greene County, Air Pollution Control Authority, Chapter 2A - Air Pollution Control Standards

Check one: ☐ Not Applicable ☐ Applicable

Article III Approval of Planned Installations
Article IV Restriction of Emission of Visible Air Contaminants from Equipment
Article V Emission of Particulate Matter from Fuel Burning Equipment
Article VI Restriction of Emission of Particulate Matter from Industrial Processes
Article VIII Open Burning
Article X Control of Odors in the Ambient Air
Article XI Nuisances Because of Air Pollution
Article XII Submission of Information
Article XIII Variance Provisions
Article XVI Breakdown of Equipment
Article XVII Circumvention
Article XVIII Service of Orders or Notices
Article XIX Enforcement of This Chapter

6.06 **St. Louis County Local Rules.** St. Louis County Department of Health, Air, Land & Water Branch, Air Pollution Control Section, Chapter 612 - Air Pollution Control Code

Check one: ☐ Not Applicable ☐ Applicable

612.100 Emergency Abatement of Violation - Procedure
612.110 Permits Required
612.120 Permits to be Visibly Affixed or Placed
612.130 Permit to Sell or Rent
612.140 Transfer
612.150 Permit to Operate - When Required
612.160 General Requirements for Applications for Authority to Construct and Operating Permits

612.170 Information Required for Application for Permits
612.180 Standards for Granting Permits
612.190 Cancellation of Authority to Construct
612.200 Testing Prior to Granting of Operating Permits
612.210 Action on Application for Permits
612.220 Suspension or Revocation of Permits
612.230 Suspension of Revocation of Operating Permits or Authority to Construct, Board Hearing, Stay of Action
612.240 Surrender of Permits
612.250 Fees, When Payable, Exceptions
612.260 Permit Fees; Schedules
612.270 Permit Fees; Refund
612.280 Testing by Order of the Board
612.290 Right of Entry; Inspections; Samples
612.300 Variances
612.310 Upset Conditions, Breakdown, or Scheduled Maintenance
612.320 Service of Notice
612.340 Air Pollution Nuisances Prohibited
612.370 False or Misleading Oral Statements; Unlawful Reproduction or Alteration of Documents
612.380 Interfering with or Obstructing Division Personnel
612.390 Penalties for Violation
612.400 Construction

6.07 **City of St. Louis Local Rules.** City of St. Louis, Division of Air Pollution Control

Check one: ☐ Not Applicable ☐ Applicable

Ordinance 50163:

- Section 15 When Emissions of Pollutants Become a Nuisance
- Section 17 Registration of Sources of Air Pollutants
- Section 18 Permits for Fuel or Refuse Burning Equipment
- Section 19 Labels to be Affixed to Approved Installations
- Section 21 Commissioner to Approve Plans and Issue Permits
- Section 22 Amended by 55293
- Section 23 Commissioner May Enter Premises
- Section 27 Penalty Clause

Ordinance 55293:

- Section 1 Amendment of Section 22 of 50163 - Fees

Ordinance 59270:

- Section 8 Maximum Allowable PM from Indirect Heating
- Section 9 Use of Hand Fired Equipment Prohibited
- Section 10 Amended by 60023
- Section 12 Open Burning Restrictions
- Section 14 Restriction of Emissions of Visible Air Contaminants
- Section 15 Preventing Air Contaminants from Becoming Air-borne
- Section 16 Restriction of the Emission of SO₂ from Use of Fuel
- Section 17 Importation, Sale, Transportation, Use of Certain Coals
- Section 18 Information on Sales of Fuels to be Provided and Maintained
- Section 20 Control of Odors in the Ambient Air
- Section 22 Air Pollution Nuisances Prohibited
- Section 33 Emergency Procedures
- Section 34 Rules for Controlling Emissions During Periods of High Air Pollution
- Section 36 Measurements of Emissions of Air Contaminants
- Section 37 Upset Conditions, Breakdown or Scheduled Maintenance
- Section 39 Permits and Inspection Fees
- Section 40 Rules Governing Sources in Non-Attainment Areas and PSD in Attainment Areas
- Section 41 Alternate Emission Limits
- Section 42 Enforcement
- Section 43 Right of Inspection and Disclosure of Production Data
- Section 44 Confidentiality of Records
- Section 45 Cooperation Required
- Section 46 Circumvention
- Section 47 Continuation
- Section 48 Penalty Clause
- Section 49 Severability
- Section 50 Emergency Clause

Ordinance 60023:

- Section 1 Amendment of Section 10 of Ordinance 59270 - Restriction of PM from Industrial Processes
- Section 5 Amended by 60629
- Section 10 Continuation
- Section 11 Penalty Clause
- Section 12 Severability

Ordinance 60629:

- Section 2 Amendment of Section 5 of Ordinance 60023 - New Performance Standards Adopted
- Section 6 Continuation
- Section 7 Penalty Clause
- Section 8 Severability

Section 7.0 - Pollution Control Requirements

7.01 The permittee shall limit emissions by the operation of control equipment required by the following:

Present Particulate Control Device Requirements contained in "Permits to Construct" issued by the permitting authority as noted in Table A in Section IV - Existing Permit Conditions.

Check one: ☐ Not Applicable ☐ Applicable

7.02 All required particulate control devices noted in Table A in Section IV shall be implemented upon the respective emission units at all times that the units are in operation. When control devices are operated, they shall be operated in accordance with the following, if applicable:

1. Oil-based dust-suppression system.

- a. An **oil-based dust-suppression system** shall be designed, maintained and operated to apply as the minimum one and one-half (1.5) gallons of mineral or refined soybean oil per one thousand (1000) bushels of grain; once grain is oiled, control factors for oil-based dust-suppression may be applied in all further emission units through which the grain passes if a record of oiling is maintained.
- b. Control factors for oil-based dust-suppression, if oil is applied in accordance with a. above, may be allowed at another plant or source if a copy of all records of such oiling is transmitted with the grain.
- c. **Records** of the monthly ratio of oil applied to grain oiled in gallons per 1000 bushels of grain **shall be kept**, along with the calculation resulting in this ratio.

2. Fabric filter (baghouse) system.

- a. A **fabric filter (baghouse) system** shall be designed, maintained and operated to ensure optimal efficiency in the removal of PM₁₀.
- b. The baghouse shall be equipped with a gauge or meter which indicates the pressure drop across the baghouse.
- c. Records of maintenance performed on the baghouse system shall be kept, including bag replacement and dates of replacement.
- d. Replacement bags shall be kept on hand at all times.

3. Cyclone system.

- a. A **cyclone system** shall be designed, maintained and operated to ensure optimal efficiency in the removal of PM₁₀.
- b. Records of maintenance performed on the cyclone system shall be kept.

Section 8.0 - Production or Processing Limits.

The permittee shall limit emissions by limiting the quantity of grain and/or other feed ingredients received or quantity of feed or other products produced to the following:

8.01 **Standardized grain receiving and/or feed production limits** as checked in the table in Sect. III Option B.

Check one: ☐ Not Applicable ☐ Applicable

- 8.02 **Present grain receiving, processing or feed production limits** established by permit conditions contained in "Permits to Construct" issued by the permitting authority as noted in Table B (for Intermediate State Installations) in Section IV - Present Permit Conditions or the table (for Basic State Installations) in Section III Option A2.

Check one: ☐ Not Applicable ☐ Applicable

NOTE: In a situation in which both this Section 8.02 and Section 8.01 apply, the more restrictive limit shall apply to this installation.

- 8.03 **Grain receiving and/or production record keeping.**

NOTE: This subsection shall apply only if Section 8.01 or 8.02 is applicable.

Check one: ☐ Not Applicable ☐ Applicable

Monthly records of grain received or processed, or feed produced or processed, whichever is applicable, shall be kept in order to demonstrate compliance with limits established in Sections 8.01 and 8.02. Records shall also be kept to demonstrate totals for each twelve-month (12-month) rolling period.

- 8.04 **Grain receiving and/or production reporting.**

NOTE: This subsection shall apply only if Section 8.01 or 8.02 is applicable.

Check one: ☐ Not Applicable ☐ Applicable

This installation shall report to the Air Pollution Control Enforcement Section, no later than ten (10) days after the end of each month, if the 12-month cumulative total records show that the source exceeded the limitation established in Section 8.01 or 8.02.

Section 9.0 - Fuel Combustion Limits . The permittee shall limit amounts and types of fuel combusted as follows:

- 9.01 **Present fuel combustion limits** established by permit conditions contained in "Permits to Construct" issued by the permitting authority as noted in Table C in Section IV - Present Permit Conditions.

Check one: ☐ Not Applicable ☐ Applicable

NOTE: In a situation in which both this Section 9.01 and Section 9.02 apply, the more restrictive limit shall apply to this installation.

- 9.02 **Standardized Fuel Oil Combustion Limit..** (See instructions and application for Sect. III, Option B.)

Check one: ☐ Not Applicable ☐ Applicable

No more than 830,000 gallons (potential annual usage of 14.2 MMBtu/Hr. boiler) of fuel oil shall be combusted at this installation.

- 9.03 **Fuel Combustion Record Keeping.**

Note: This subsection shall apply only if Section 9.01 or 9.02 applies.

Check one: ☐ Not Applicable ☐ Applicable

Monthly records of fuel(s) combusted and other fuel data, if applicable, shall be kept in order to demonstrate compliance with limits established in Sections 9.01 and 9.02. Records shall also be kept to demonstrate the total(s) for the previous twelve-month (12-month) period.

9.04 **Fuel Combustion Reporting.**

NOTE: This subsection shall apply only if Section 9.01 or 9.02 is applicable.

Check one: ☐ Not Applicable ☐ Applicable

This installation shall report to the Air Pollution Control Enforcement Section, no later than ten (10) days after the end of each month, if the 12-month cumulative total records show that the source exceeded the limitation established in Section 9.01 or 9.02.

Section 10.0 - Records Retention

- 10.01 All record keeping must be retained at the installation for a minimum period of five (5) years, and shall be made available immediately to representatives of the permit authority upon verbal request.
- 10.02 The permittee shall maintain a copy of this permit at this installation. A copy of this permit shall be placed on-file at each approved source no later than 30 days after the date of the letter of transmittal.

Section 11.0 - Inspection and Entry

- 11.01 The permittee shall allow authorized representatives of the permitting authority to perform the following:
 - 1. Enter upon the permittee's premises where the Basic or Intermediate State source or activity is located or conducted, or where records must be kept under the conditions of this permit;
 - 2. Have access to and copy at reasonable times any records that must be kept under the conditions of this permit;
 - 3. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operation regulated or required under this permit; and
 - 4. Sample or monitor any substances or parameters at any location, during operating hours, for the purpose of assuring permit compliance.
- 11.02 No person shall obstruct, hamper, or interfere with any such authorized representative while in the process of carrying out her/his official duties. Refusal of entry or access may constitute grounds for permit revocation and enforcement action.